

DOE/RW-0325P

Office of Civilian Radioactive Waste Management



Program Work Breakdown Structure (WBS) and Dictionary

Revision 03

(A00000000-00811-4600-00005)

September 1999

***U. S. Department of Energy
Office of Civilian Radioactive Waste Management
Washington, DC 20585***

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**OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
PROGRAM BASELINE CHANGE CONTROL BOARD
REVISION/CHANGE RECORD**

(1) DOCUMENT NUMBER: DOE/RW-0325P

(2) DOCUMENT TITLE: PROGRAM WORK BREAKDOWN STRUCTURE AND DICTIONARY

(3) REVISION DATE/ NUMBER	(4) DCP/BCP NUMBER	(5) REVISION/CHANGE DESCRIPTION	(6) PAGES AFFECTED
09/30/1999 Rev. 3	BCP-00-99-0008 (Program Level-1); BCP-07-99-0001 (PM&A Level-2); and BCP-08-99-0001 (QA Level-2)	This revision reflects RW-1 direction to align the Program with the OCRWM management structure. This involves: (1) separating Quality Assurance (QA) activities from WBS 9.1 to a newly created WBS 8.0; (2) realigning the former WBS 9.2 (Program Management and Integration) and WBS 9.3 (Human Resources and Administration) into the new WBS 9.1 (Systems Integration) and WBS 9.2 (Program Management & Administration); (3) transferring the work scope for DOE Nuclear Materials from WBS 9.2.1.3 to WBS 3.2.4; and (4) providing minor rewording for all WBS elements and subelements transferred to the new hierarchy.	ALL
03/25/1997 Rev. 2 DCN02	BCP-07-97-0006	This revision adds one additional element, WBS 9.2.1.5 "Systems Engineering Support," defining work scope of the support services contractor in the areas of systems integration, systems analysis, DOE nuclear materials, baseline management, and international activities.	17, B-7a
12/02/1996 Rev. 2 DCN01	BCP-07-97-0001	Revise WBS elements for systems engineering to include development efforts and Memorandum of Agreements related to HLW and DOE Spent Nuclear Fuel which was moved from OWAST work scope, Total System Life Cycle Cost report and the Fee Adequacy report which was moved from WBS 9.2.5 Program Management.	17, B-2 thru B-7, B-16, B-17
08/07/1996 Rev. 2	BCP-00-96-0003	This revision reflects the Congressional Program redirection mandated in the FY 1996 Energy and Water Development Appropriations Act. The work scope is based on the revised Program Plan and the baseline period extends through repository license application for the Yucca Mountain Project, Quality Assurance, Program Management and Integration, and Human Resources and Administration. For the WAST Project, the baseline period extends through Congressional identification of an interim storage site. The new strategy narrows the focus of the scientific work at Yucca Mountain to resolve the remaining critical scientific and technical uncertainties and develop the information needed to assess the site's viability as a geologic repository in 1998. For the WAST Project, the new strategy is to create the capability, through a market-driven approach, for quickly developing a cost-effective, fully integrated waste acceptance and transportation system, and upon receiving Congressional	Definitions for: WBS 0.0, YMP, WAST, QA, PMI and HRA

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		guidance and authority, develop an interim storage system. This revision also deletes WBS elements 3.1, 3.2, 3.3, 3.4 and 3.5 from the Program WBS Dictionary under the control of the WAST Project Manager.	
09/19/1995 Rev. 1	BCP-00-95-0021	This complete revision incorporates the revised Work Breakdown Structure (WBS) as approved by the Director, OCRWM on a June 21, 1995 memorandum, "Proposed OCRWM Program Work Breakdown Structure." The document contains WBS definitions down to WBS Level-2. WBS Level-3 definitions for the Yucca Mountain and Waste Acceptance, Storage and Transportation Projects are found in the respective Project WBS Dictionaries. For WBS 9.0, Program Integration, WBS definitions down to the terminal level (mandated level specified for visibility requirements) are in Appendix A of this document.	ALL
12/04/1992 Rev. 0	DCP 55	Initial Issue.	ALL

WBS 9.2.2.1
QA: N/A

**Civilian Radioactive Waste Management System
Management & Operating Contractor**

**Office of Civilian Radioactive Waste Management
Program Work Breakdown Structure (WBS) and Dictionary**

A00000000-00811-4600-00005 REV 03

September 1999

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**U.S. Department of Energy
Office of Civilian Radioactive Waste Management
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**Under Contract Number
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WBS 9.2.2.1.
QA: N/A

**Civilian Radioactive Waste Management System
Management & Operating Contractor**


**Office of Civilian Radioactive Waste Management
Program Work Breakdown Structure (WBS) and Dictionary**

A00000000-00811-4600-00005 REV 03


September 1999

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EXECUTIVE SUMMARY

The purpose of this Program Work Breakdown Structure (WBS) and Dictionary is to identify and define the individual work elements required to achieve the objectives of the Civilian Radioactive Waste Management (CRWM) System Program. It also provides an ordered framework to plan and control these interrelated work elements and to summarize this data.

The Program WBS and Dictionary describes and categorizes the work scope performed by the Office of Civilian Radioactive Waste Management (OCRWM) to fulfill the Nuclear Waste Policy Act of 1982, As Amended (NWPAA) through the submittal of the repository license application (LA) to the Nuclear Regulatory Commission (NRC). The Program WBS and Dictionary:

- Reflects the OCRWM project management structure; its core elements are the Yucca Mountain Site Characterization Project (YMP), the Waste Acceptance, Storage and Transportation (WAST) Project, Quality Assurance (QA), and Program Management and Integration (PM&I)
- Identifies the total program work scope and thus provides a clear and direct basis for calculating total program cost which is the sum of total project cost of the four project-level elements plus historical costs of inactive elements
- Facilitates reporting to the Department of Energy (DOE) Acquisition Executive and budget review by the Office of Management and Budget (OMB) and the Congress
- Identifies products that will result in the operational waste management system and is consistent with the physical system structure when possible
- Provides a sound basis for a logical progression of the Program WBS over the total life cycle of the Program.

Project Managers for the YMP and the WAST Project, in coordination with the Director, Program Control and Administration Division (RW-53), shall develop project-level WBS elements that are consistent with the Program WBS.

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ACRONYMS

ACNW	Advisory Committee on Nuclear Waste (NRC)
ADP	Automated Data Processing
AFS	Automated Forms System
B/L	Baseline
CAR	Corrective Action Report
C&S	Cost and Schedule
CBT	Computer Based Training
CFR	Code of Federal Regulations
CISF	Centralized Interim Storage Facility
CMIS	Configuration Management Information System
CRWM	Civilian Radioactive Waste Management
DMD	Digital Media Database
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EA	Environmental Assessment
EEO	Equal Employment Opportunity
EIS	Environmental Impact Statement
EM	Office of Environmental Restoration and Waste Management (DOE)
EPA	U.S. Environmental Protection Agency
ES&H	Environmental Safety & Health
ESF	Exploratory Studies Facility
GAO	General Accounting Office
GC	General Council
HBCU	Historically Black Colleges and Universities
HLW	High-Level Waste
HQ	Headquarters
HR	Human Resources
HRL	Hard Rock Laboratory
IAEA	International Atomic Energy Agency
IG	Inspector General
IM	Information Management
IRM	Information Resources Management
ITS	Integrated Tracking System
M&O	Management & Operating Contractor
MGR	Monitored Geologic Repository

ACRONYMS (Continued)

MRS	Monitored Retrievable Storage
N/A	Not Applicable
NARUC	National Association of Regulatory Utility Commissioners
NAS	National Academy of Sciences
NCO	NEPA Compliance Officer
NEPA	National Environmental Policy Act
NIC	National Information Center
NNPP	Naval Nuclear Propulsion Program
NRC	U.S. Nuclear Regulatory Commission
NWF	Nuclear Waste Fund
NWPA	Nuclear Waste Policy Act of 1982, As Amended
NWTRB	Nuclear Waste Technical Review Board
OATI	Office of Acceptance, Transportation and Integration
OCRWM	Office of Civilian Radioactive Waste Management
OPRRS	OCRWM Program Records Retention Schedule
OMB	Office of Management and Budget
OPMA	Office of Program Management & Administration
OQA	Office of Quality Assurance
PACS	Planning and Control System
PMI	Program Management & Integration
QA	Quality Assurance
QAMA	Quality Assurance Management Assessment
QARD	Quality Assurance Requirements and Description
QC	Quality Control
RFP	Request for Proposal
RSC	Regional Servicing Contractor
RW	Office of Civilian Radioactive Waste Management
S&S	Safeguards & Security
SKB	Swedish Nuclear Fuel and Waste Management Company
SNF	Spent Nuclear Fuel
SSMP	Strategic System Management Policy
TSAR	Topical Safety Analysis Report
TSLCC	Total System Life Cycle Cost
USGS	United States Geological Survey
USS	Unified Scanning System

ACRONYMS (Continued)

WA&T	Waste Acceptance and Transportation
WAN	Wide Area Network
WAST	Waste Acceptance, Storage and Transportation
WBS	Work Breakdown Structure
YMP	Yucca Mountain Site Characterization Project
YMSCO	Yucca Mountain Site Characterization Office

INTRODUCTION

The purpose of this Program Work Breakdown Structure (WBS) and Dictionary is to identify and define the individual work elements required to achieve the objectives of the Civilian Radioactive Waste Management (CRWM) System Program. It also provides an ordered framework to plan and control these interrelated work elements and to summarize this data.

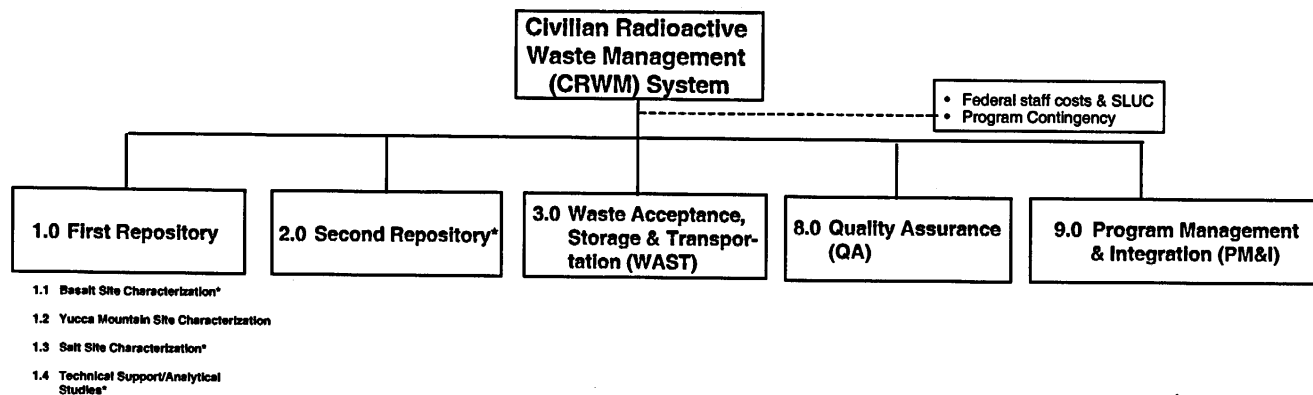
The Program WBS and Dictionary describes and categorizes the work scope performed by the Office of Civilian Radioactive Waste Management (OCRWM) to fulfill the Nuclear Waste Policy Act of 1982, As Amended (NWPAA) through the submittal of the repository license application (LA) to the Nuclear Regulatory Commission (NRC). The Program WBS and Dictionary:

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- Provides a sound basis for a logical progression of the Program WBS over the total life cycle of the Program.

Project Managers for the YMP and the WAST Project, in coordination with the Director, Program Control and Administration Division (RW-53), shall develop project-level WBS elements that are consistent with the Program WBS.

The Program WBS and Dictionary implements *DOE Order 430.1, Life Cycle Asset Management* (DOE 1997) and the *CRWM Strategic System Management Policy (SSMP)* (CRWMS M&O 1998).

Figure 1 presents the CRWM System WBS for the OCRWM Program. Figure A-1 presents the project-level QA WBS, and Figure B-1 presents the project-level PM&I WBS. WBS definitions for the YMP and the WAST Project are found in their respective Project WBSs and Dictionaries. For WBS 8.0 and 9.0, WBS definitions down to the terminal level (mandated level specified for visibility requirements) can be found in Parts I and II, and in Appendices A and B. This document consists of the Program WBS and Dictionary Index (Part I), Program WBS and Dictionary Element Definition (Part II), Quality Assurance (QA) WBS and Dictionary (Appendix A), and Program Management & Integration (PM&I) WBS and Dictionary (Appendix B).



* Inactive WBS Element

Figure 1. CRWM System WBS

PART I
PROGRAM WORK BREAKDOWN STRUCTURE (WBS) AND DICTIONARY
INDEX

**U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART I - INDEX**

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(11-84)

FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT										2. DATE		3. IDENTIFICATION NUMBER	
Civilian Radioactive Waste Management (CRWM) System										09/30/1999		N/A	
4. LINE NO.	5. WBS ELEMENTS								6. PARTICIPANT WBS ELEMENT CODE	7. BUDGET AND REPORTING NO.	8. PHASE	9. OTHER	
	INDENTURE LEVEL												
	1	2	3	4	5	6	-	-					
1									Civilian Radioactive Waste Management (CRWM) System	0.0			
2	X								First Repository	1.0			
3		X							Basalt Site Characterization (Inactive)	1.1			
4		X							Yucca Mountain Site Characterization	1.2			
5		X							Salt Site Characterization (Inactive)	1.3			
6		X							Technical Support/Analytical Studies (Inactive)	1.4			
7	X								Second Repository (Inactive)	2.0			
8	X								Waste Acceptance, Storage & Transportation (WAST)	3.0			
9	X								Quality Assurance (QA)	8.0			
10	X								Program Management & Integration (PM&I)	9.0			

PART II

**PROGRAM WORK BREAKDOWN STRUCTURE (WBS) AND DICTIONARY
ELEMENT DEFINITION**

U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION

DOE F1332.11 #
(11-84)

FORM APPROVED
DMS NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Civilian Radioactive Waste Management (CRWM) System		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 0.0		5. WBS ELEMENT TITLE Civilian Radioactive Waste Management (CRWM) System	
6. INDEX LINE NO. 1	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>The CRWM System components are the: Monitored Geologic Repository (MGR) element [Yucca Mountain Site Characterization Project (YMP)]; Waste Acceptance, Storage and Transportation (WAST) Project elements; Quality Assurance (QA) element; and the Program Management and Integration (PM&I) element.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to: conduct site investigations at Yucca Mountain, Nevada to determine if sufficient information is available to make a site recommendation and, if the site recommendation is accepted, develop a license application (LA); plan for the acquisition of transportation and waste acceptance systems; and perform QA and PM&I in support of the Yucca Mountain and WAST Projects. The major products of the YMP include the site recommendation (SR), repository environmental impact statement (EIS), and repository license application to the Nuclear Regulatory Commission (NRC). The major products of the WAST Project include: transportation Regional Servicing Contractor (RSC) Requests for Proposals (RFPs); non-site specific Centralized Interim Storage Facility (CISF) Technical Safety Analysis Report (TSAR); and PM&I activities. The QA element provides quality assurance and quality control support to the Office of Civilian Radioactive Waste Management (OCRWM) Program, the Management & Operating contractor (M&O), and other affected organizations. The PM&I element provides for services and products necessary to integrate the Program and to ensure compliance with applicable statutes and regulations and Departmental policy and directives.</p>			

**U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1801-1400

1. PROJECT TITLE/PARTICIPANT Civilian Radioactive Waste Management (CRWM) System		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 1.0		5. WBS ELEMENT TITLE First Repository	
6. INDEX LINE NO. 2	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Siting, design and licensing of a geological repository for radioactive high-level waste (HLW).</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to site, design and license the First Repository.</p>			

**U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

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(11-84)

FORM APPROVED
OMB NO. 1801-1400

1. PROJECT TITLE/PARTICIPANT		2. DATE	3. IDENTIFICATION NUMBER
Civilian Radioactive Waste Management (CRWM) System		09/30/1999	N/A
4. WBS ELEMENT CODE		5. WBS ELEMENT TITLE	
1.1		Basalt Site Characterization (Inactive)	
6. INDEX LINE NO.	7. REVISION NO. AND AUTHORIZATION		8. DATE
3	Revision 3		09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION			
<p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Siting of basalt medium for radioactive high-level waste (HLW) geologic repository.</p> <p>c. Work Statement</p> <p>This WBS element refers to the inactive work scope related to the site characterization of a basalt site (Hanford, Washington) for a geologic repository.</p>			

**U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

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FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT		2. DATE	3. IDENTIFICATION NUMBER
Civilian Radioactive Waste Management (CRWM) System		09/30/1999	N/A
4. WBS ELEMENT CODE		5. WBS ELEMENT TITLE	
1.2		Yucca Mountain Site Characterization	
6. INDEX LINE NO.	7. REVISION NO. AND AUTHORIZATION		8. DATE
4	Revision 3		09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION			
<p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Site characterization of Yucca Mountain, Nevada to determine if sufficient information is available to make a site recommendation for a radioactive high-level waste (HLW) geologic repository facility. If the site recommendation is accepted, prepare a license application (LA) to the Nuclear Regulatory Commission (NRC).</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to: conduct surface-based tests including collection and analysis of geologic, hydrologic, geochemical, and climatological data; conduct environmental monitoring and data collection; construct an underground exploratory studies facility (ESF), and conduct an in-situ test program within that facility; design a repository and waste package; prepare an environmental impact statement (EIS); conduct institutional interactions with the State of Nevada and affected local governments; conduct interactions with the Nuclear Regulatory Commission (NRC) and the Nuclear Waste Technical Review Board (NWTRB); provide financial assistance for the investigation, mitigation and oversight by the State of Nevada and other affected units of government; and conduct project management activities. Additionally, this element provides for the conduct of necessary geoscientific analyses, risk assessments, material characterization tasks related to spent nuclear fuel (SNF) and radioactive HLW forms, development and analysis of performance assessment models, and defense radioactive HLW disposal design and performance studies. It also includes necessary project-level systems engineering, information management and support services activities. Also included are activities necessary for the preparation and submittal of a LA to the NRC to construct a radioactive HLW repository.</p>			

**U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

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1. PROJECT TITLE/PARTICIPANT Civilian Radioactive Waste Management (CRWM) System		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 1.3		5. WBS ELEMENT TITLE Salt Site Characterization (Inactive)	
6. INDEX LINE NO. 5	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Siting of salt medium for radioactive high-level waste (HLW) geologic repository.</p> <p>c. Work Statement</p> <p>This WBS element refers to the inactive work scope related to the site characterization of a salt site for a geologic repository.</p>			

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PART II - ELEMENT DEFINITION**

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1. PROJECT TITLE/PARTICIPANT Civilian Radioactive Waste Management (CRWM) System		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 1.4		5. WBS ELEMENT TITLE Technical Support/Analytical Studies (Inactive)	
6. INDEX LINE NO. 6	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Technology development and integration, site selection and evaluation, pre-operational testing facility design studies, repository operations, licensing, related transportation activities, and technical direction in support of the development of a geologic repository for radioactive high-level waste (HLW).</p> <p>c. Work Statement</p> <p>This WBS element refers to the inactive work scope related to non-generic research and development and technical support for the development of Federal repository facilities for receipt, custody and terminal isolation of radioactive HLW. It also includes those activities not specifically identified with either the Basalt, Tuff or Salt sites.</p>			

**U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

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FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT Civilian Radioactive Waste Management (CRWM) System		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 2.0		5. WBS ELEMENT TITLE Second Repository (Inactive)	
6. INDEX LINE NO. 7	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element refers to the inactive work scope necessary to develop a second repository. Lower-level WBS elements will be developed if and when a decision is made to proceed with the siting of a second repository.</p>			

**U.S. DEPARTMENT OF ENERGY
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PART II - ELEMENT DEFINITION**

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FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT		2. DATE	3. IDENTIFICATION NUMBER
Civilian Radioactive Waste Management (CRWM) System		09/30/1999	N/A
4. WBS ELEMENT CODE		5. WBS ELEMENT TITLE	
3.0		Waste Acceptance, Storage & Transportation (WAST)	
6. INDEX LINE NO.	7. REVISION NO. AND AUTHORIZATION		8. DATE
8	Revision 3		09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION			
<p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Waste Acceptance, Storage and Transportation includes the entire Waste Acceptance and Transportation (WA&T), Centralized Interim Storage Facility (CISF), and Casks/Canisters subsystems. Those subsystems include the all activities and products necessary for the acceptance and transport of commercial spent nuclear fuel (SNF) and defense radioactive high-level waste (HLW) to a CISF and/or ultimately to the Monitored Geologic Repository (MGR).</p> <p>The CISF includes the inactive Monitored Retrievable Storage (MRS) Facility as well as the planning, design, licensing, construction and operation activities associated with a CISF. Technology Demonstration Projects activities that could benefit one or more subsystems are also contained within this WBS element.</p> <p>Project Management and Administration provides the direction, coordination and support to produce high-quality products on time and within budget.</p> <p>c. Work Statement</p> <p>This WBS element includes all WAST Project work scope from the start of the project in 1983 through the development and implementation of the Waste Acceptance, Storage (if directed by Congress), and Transportation subsystems for the ultimate disposal of SNF from reactor sites.</p> <p>The WAST Project element will address the long-lead time activities that must precede any near-term removal of SNF from reactor sites once a federal facility becomes available. This includes a market-driven initiative to create a national transportation capability necessary to remove SNF by preparing contingency plans to award contracts to the private sector for canister, transport cask and storage module production, and WA&T services. This approach offers a market stimulus for commercial development of equipment required for the transportation and storage of SNF.</p>			

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DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1801-1400

1. PROJECT TITLE/PARTICIPANT Civilian Radioactive Waste Management (CRWM) System		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.0		5. WBS ELEMENT TITLE Quality Assurance (QA)	
6. INDEX LINE NO. 9	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to provide support to the Office of Civilian Radioactive Waste Management (OCRWM) Program, the Management & Operating contractor (M&O), and other affected organizations by:</p> <ol style="list-style-type: none"> 1. Developing, maintaining and reviewing the QA program via the Quality Assurance Requirements and Description (QARD), its implementing procedures and matrices to track implementation of QA requirements; 2. QA verification through audits and surveillance; 3. QA engineering through in-process reviews of design-related documents; 4. QA field test support for Yucca Mountain-related activities through surveillance and reviews; and 5. Implementing the OCRWM Concerns Program. 			

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PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Civilian Radioactive Waste Management (CRWM) System		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.0		5. WBS ELEMENT TITLE Program Management & Integration (PM&I)	
6. INDEX LINE NO. 10	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to:</p> <ol style="list-style-type: none"> 1. Integrate the CRWM System and verify compliance with regulatory and technical requirements. This includes establishing and maintaining policy and requirements for systems engineering; establishing policies for baseline management and change control; establishing requirements and providing oversight for associated change control procedures; developing policy and procedures to support the regulatory process; and developing and establishing regulatory policy and requirements for the Office of Civilian Radioactive Waste Management (OCRWM) Program. 2. Provide analysis of Total System Life Cycle Cost (TSLCC) and Fee Adequacy; program cost and schedule planning and control; program management policies and procedures; management and program status analysis; budgeting; and analysis of proposed baseline changes. 3. Coordinate all regulatory interactions between the DOE and external organizations, including licensing, Environmental Safety and Health (ES&H), and the Nuclear Environmental Protection Agency (NEPA). In addition, coordinate other activities (e.g., correspondence, agreements, and commitments) with Federal agencies and commitments such as the Nuclear Regulatory Commission (NRC), the Advisory Committee on Nuclear Waste (ACNW), the Department of Transportation (DOT), and the Environmental Protection Agency (EPA). 4. Establish Program-level regulatory policy, licensing strategy and requirements related to Safeguards and Security (S&S), implementation of those requirements and facilitate coordination of S&S activities with external organizations. 5. Perform strategic planning acting as the principal interface and liaison between OCRWM and the Nuclear Waste Technical Review Board (NWTB). 6. Provide expert input for OCRWM international program planning, management, and policy development for institutional, organizational and programmatic activities, and support the cooperative agreements with other countries interested in exchanging information and developing consensus on waste management issues. 7. Provide human resources training, support services, and customer service. 			

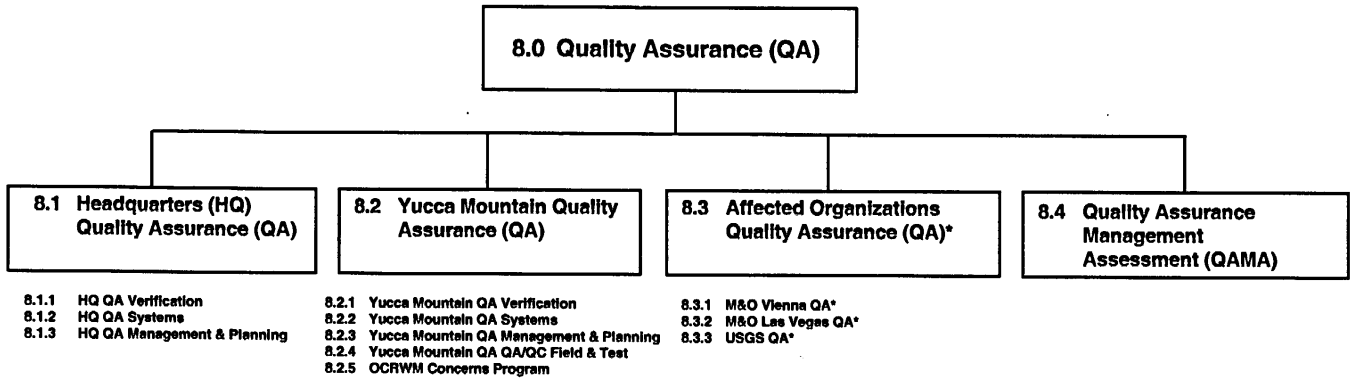
REFERENCES

Civilian Radioactive Waste Management System Management and Operating Contractor 1998. *Civilian Radioactive Waste Management Strategic System Management Policy*. A00000000-00811-4800-00002 REV 00. Vienna, Virginia: CRWMS M&O. ACC: HQO.19980422.0001. April 1998.

U.S. Department of Energy 1997. *DOE Order 430.1, Life Cycle Asset Management*, Washington, D.C.: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. Readily available.

APPENDIX A

QUALITY ASSURANCE (QA) WORK BREAKDOWN STRUCTURE (WBS)
AND DICTIONARY



* Inactive WBS Element

Figure A-1. Quality Assurance (QA) WBS

**U.S. DEPARTMENT OF ENERGY
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PART I - INDEX**

DOE F1332.10 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT											2. DATE		3. IDENTIFICATION NUMBER	
Quality Assurance (QA)											09/30/1999		N/A	
4. LINE NO.	5. WBS ELEMENTS								6. PARTICIPANT WBS ELEMENT CODE	7. BUDGET AND REPORTING NO.	8. PHASE	9. OTHER		
	INDENTURE LEVEL													
	1	2	3	4	5	6	-	-						
1	X								Quality Assurance (QA)	8.0				
2		X							Headquarters (HQ) Quality Assurance (QA)	8.1				
3			X						Headquarters (HQ) Quality Assurance (QA) Verification	8.1.1				
4			X						Headquarters (HQ) Quality Assurance (QA) Systems	8.1.2				
5			X						Headquarters (HQ) Quality Assurance (QA) Management & Planning	8.1.3				
6		X							Yucca Mountain Quality Assurance (QA)	8.2				
7			X						Yucca Mountain Quality Assurance (QA) Verification	8.2.1				
8			X						Yucca Mountain Quality Assurance (QA) Systems	8.2.2				
9			X						Yucca Mountain Quality Assurance (QA) Management & Planning	8.2.3				
10			X						Yucca Mountain Quality Assurance (QA)/Quality Control Field & Test	8.2.4				
11			X						OCRWM Concerns Program	8.2.5				
12		X							Affected Organizations Quality Assurance (QA) (Inactive)	8.3	Inactive			
13			X						M&O Vienna Quality Assurance (QA) (Inactive)	8.3.1	Inactive			
14			X						M&O Las Vegas Quality Assurance (QA) (Inactive)	8.3.2	Inactive			
15			X						United States Geological Survey (USGS) Quality Assurance (QA) (Inactive)	8.3.3	Inactive			
16		X							Quality Assurance Management Assessment (QAMA)	8.4				

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DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.0		5. WBS ELEMENT TITLE Quality Assurance (QA)	
6. INDEX LINE NO. 1	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes the work scope to provide support to the Office of Civilian Radioactive Waste Management (OCRWM) Program, the Management & Operating contractor (M&O), and other affected organizations by: 1. Developing, maintaining, and reviewing the QA program via the Quality Assurance Requirements and Description (QARD), its implementing procedures and matrices to track implementation of QA requirements; 2. QA verification through audits and surveillance; 3. QA engineering through in-process reviews of design-related documents; 4. QA field test support for Yucca Mountain-related activities through surveillance and reviews; and 5. Implementing the OCRWM Concerns Program.			

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FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.1		5. WBS ELEMENT TITLE Headquarters (HQ) Quality Assurance (QA)	
6. INDEX LINE NO. 2	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes the work scope related to activities of the Office of Acceptance, Transportation & Integration (OATI) and the Office of Program Management & Administration (OPMA) in: providing QA program management advice and planning; establishing and maintaining the Office of Civilian Radioactive Waste Management (OCRWM) QA program and implementing procedures; conducting QA verification activities; and executing QA engineering functions and other activities performed by the Office of Quality Assurance (OQA), including the generation, accumulation, and submittal to the Department of Energy (DOE) of associated QA records.			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.1.1		5. WBS ELEMENT TITLE Headquarters (HQ) Quality Assurance (QA) Verification	
6. INDEX LINE NO. 3	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to conduct HQ verification activities related to the Office of Acceptance, Transportation & Integration (OATI) and the Office of Program Management & Administration (OPMA).</p>			

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FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.1.2		5. WBS ELEMENT TITLE Headquarters (HQ) Quality Assurance (QA) Systems	
6. INDEX LINE NO. 4	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to: establish and maintain the Office of Civilian Radioactive Waste Management (OCRWM) QA Program and implementing procedures; execute QA engineering functions and other activities performed by the Office of Quality Assurance (OQA), including the generation, accumulation, and submittal to the Department of Energy (DOE) of associated QA records for the activities of the Office of Acceptance, Transportation & Integration (OATI) and the Office of Program Management & Administration (OPMA).</p>			

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FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.1.3		5. WBS ELEMENT TITLE Headquarters (HQ) Quality Assurance (QA) Management & Planning	
6. INDEX LINE NO. 5	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to provide QA management, advice and planning for the activities of the Office of Acceptance, Transportation & Integration (OATI) and the Office of Program Management & Administration (OPMA).</p>			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.2		5. WBS ELEMENT TITLE Yucca Mountain Quality Assurance (QA)	
6. INDEX LINE NO. 6	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes the work scope related to the activities of the Yucca Mountain Site Characterization Office (YMSCO), the Management & Operating contractor (M&O), and other affected organizations in: providing QA program management advice and planning; establishing and maintaining the Office of Civilian Radioactive Waste Management (OCRWM) QA program and implementing procedures; conducting QA verification activities; and executing QA engineering functions and other activities performed by the Office of Quality Assurance (OQA), including the generation, accumulation, and submittal to the Department of Energy (DOE) of associated QA records for YMSCO activities.			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.2.1		5. WBS ELEMENT TITLE Yucca Mountain Quality Assurance (QA) Verification	
6. INDEX LINE NO. 7	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes work scope to conduct verification activities related to the Yucca Mountain Site Characterization Office (YMSCO), including the Management & Operating contractor (M&O) and other affected organizations.</p>			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.2.2		5. WBS ELEMENT TITLE Yucca Mountain Quality Assurance (QA) Systems	
6. INDEX LINE NO. 8	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes work scope to: establish and maintain the Office of Civilian Radioactive Waste Management (OCRWM) QA Program and implementing procedures; and execute QA engineering functions and activities performed by the Office of Quality Assurance (OQA), including the generation, accumulation, and submittal to DOE of associated QA records for Yucca Mountain Site Characterization Office (YMSCO), including the Management & Operating contractor (M&O) and other affected organizations.			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.2.3		5. WBS ELEMENT TITLE Yucca Mountain Quality Assurance (QA) Management & Planning	
6. INDEX LINE NO. 9	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes the work scope to provide QA management, advice and planning for the activities of the Yucca Mountain Site Characterization Office (YMSCO), including the Management & Operating contractor (M&O), and other affected organizations.			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.2.4		5. WBS ELEMENT TITLE Yucca Mountain Quality Assurance (QA)/Quality Control (QC) Field & Test	
6. INDEX LINE NO. 10	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to provide QA/QC field test support for the Yucca Mountain site activities through surveillance and reviews.</p>			

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1. PROJECT TITLE PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.2.5		5. WBS ELEMENT TITLE OCRWM Concerns Program	
6. INDEX LINE NO. 11	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to maintain the Office of Civilian Radioactive Waste Management (OCRWM) Concerns Program, conduct OCRWM Concerns Program investigations, and issue OCRWM Concerns Program reports.</p>			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.3		5. WBS ELEMENT TITLE Affected Organizations Quality Assurance (QA) (Inactive)	
6. INDEX LINE NO. 12	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the inactive work scope related to the management of the Management & Operating contractor (M&O) QA program in Vienna, Virginia, the M&O QA program in Las Vegas, Nevada, and the United States Geological Survey (USGS) QA Program. The element also includes the inactive work scope to: manage the respective QA surveillance programs; provide budget; and provide Corrective Action Report (CAR) and root cause analysis oversight.</p>			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.3.1		5. WBS ELEMENT TITLE M&O Vienna Quality Assurance (QA) (Inactive)	
6. INDEX LINE NO. 13	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement The WBS element includes the inactive work scope related to the management of the Management & Operating contractor (M&O) QA program in Vienna, Virginia. Key activities include: managing and conducting the QA surveillance program for all activities subject to applicable requirements of the Quality Assurance Requirements and Description (QARD); supporting the identification and resolution of deficiencies identified with the Corrective Action Report (CAR) system; and executing QA engineering activities.			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.3.2		5. WBS ELEMENT TITLE M&O Las Vegas Quality Assurance (QA) (Inactive)	
6. INDEX LINE NO. 14	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement The WBS element includes the inactive work scope related to the management of the Management & Operating contractor (M&O) QA program in Las Vegas, Nevada. Key activities include: managing and conducting the QA surveillance program for all activities subject to applicable requirements of the Quality Assurance Requirements and Description (QARD); supporting the identification and resolution of deficiencies identified with the Corrective Action Report (CAR) system; and executing QA engineering activities.			

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1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.3.3		5. WBS ELEMENT TITLE United States Geological Survey (USGS) Quality Assurance (QA) (Inactive)	
6. INDEX LINE NO. 15	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement The WBS element includes the inactive work scope related to the management of the USGS QA program. Key activities include managing and conducting the QA surveillance program for all activities subject to applicable requirements of the Quality Assurance Requirements and Description (QARD), and supporting USGS Yucca Mountain activities.			

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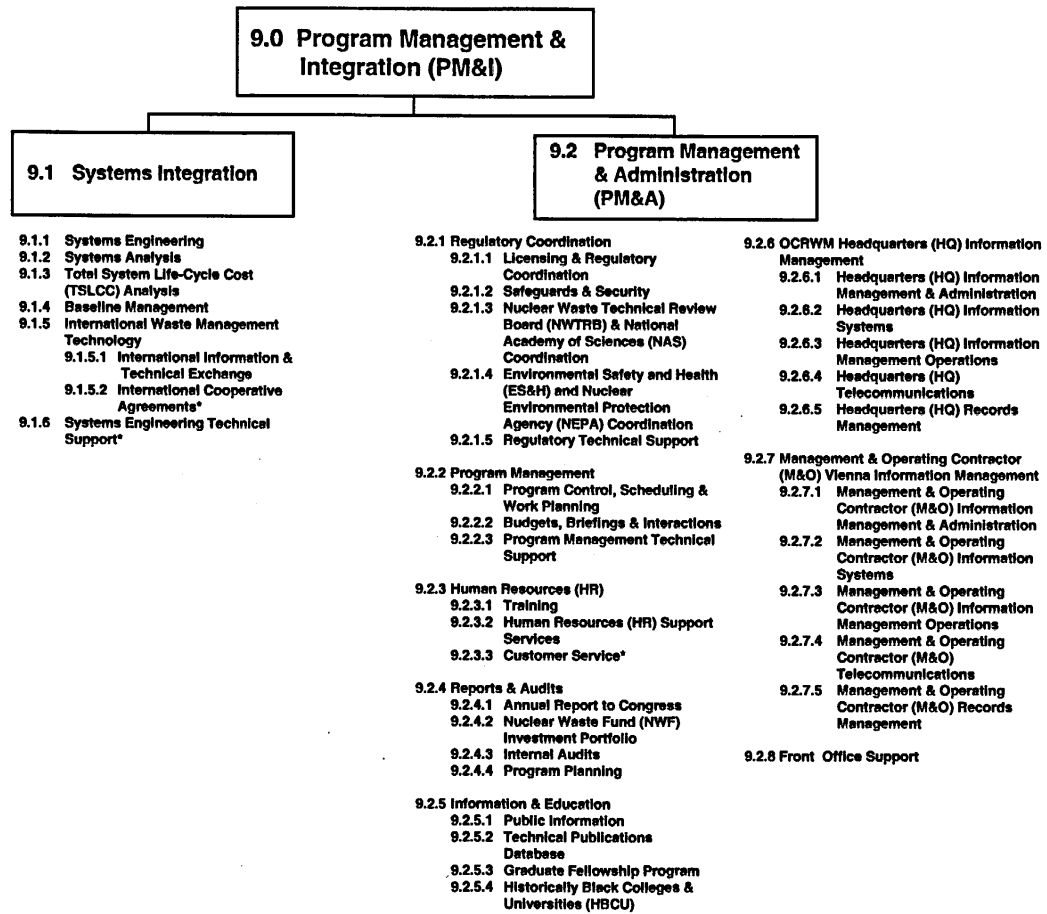
DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Quality Assurance (QA)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 8.4		5. WBS ELEMENT TITLE Quality Assurance Management Assessment (QAMA)	
6. INDEX LINE NO. 16	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
8. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>The WBS element includes the work scope related to: preparing annual updates to the Office of Civilian Radioactive Waste Management (OCRWM) wide Quality Assurance Management Assessment (QAMA) plan, resolving DOE review comments, and finalizing the updated QAMA plan; training QAMA team members on the approved QAMA plan and applicable OCRWM Quality Assurance Requirements and Description (QARD) requirements and procedures; conducting QA management assessments, including the preparation of checklist questions, reviewing documents, interviewing personnel and conducting observations. The element also includes submittal of the QAMA report to the OCRWM director, consisting of the development of appropriate recommendations based on assessment results, preparation of a preliminary draft report for RW review, resolution of RW comments on the draft report, and submittal of the final report. It also encompasses the conduct of QAMA follow-up activities, including the review of the RW Office action plan for addressing recommendations and tracking the status of actions.</p>			

APPENDIX B

**PROGRAM MANAGEMENT & INTEGRATION (PM&I) WORK BREAKDOWN
STRUCTURE (WBS) AND DICTIONARY**



* Inactive WBS Element

Figure B-1. Program Management & Integration (PM&I) WBS

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1. PROJECT TITLE/PARTICIPANT											2. DATE		3. IDENTIFICATION NUMBER	
Project Management & Integration (PM&I)											09/30/1999		N/A	
4. LINE NO.	5. WBS ELEMENTS								6. PARTICIPANT WBS ELEMENT CODE	7. BUDGET AND REPORTING NO.	8. PHASE	9. OTHER		
	INDENTURE LEVEL													
	1	2	3	4	5	6	-	-	-					
1	X									Program Management & Integration (PM&I)	9.0			
2		X								Systems Integration	9.1			
3			X							Systems Engineering	9.1.1			
4			X							Systems Analysis	9.1.2			
5			X							Total System Life-Cycle Cost (TSLCC) Analysis	9.1.3			
6			X							Baseline Management	9.1.4			
7			X							International Waste Management Technology	9.1.5			
8				X						International Information & Technical Exchange	9.1.5.1			
9				X						International Cooperative Agreements (Inactive)	9.1.5.2	Inactive		
10			X							Systems Engineering Technical Support (Inactive)	9.1.6	Inactive		
11		X								Program Management & Administration (PM&A)	9.2			
12			X							Regulatory Coordination	9.2.1			
13				X						Licensing & Regulatory Coordination	9.2.1.1			
14				X						Safeguards & Security	9.2.1.2			
15				X						Nuclear Waste Technical Review Board (NWTRB) & National Academy of Sciences (NAS) Coordination	9.2.1.3			
16				X						Environmental Safety and Health (ES&H) and Nuclear Environmental Protection Agency (NEPA) Coordination	9.2.1.4			
17				X						Regulatory Technical Support	9.2.1.5			
18			X							Program Management	9.2.2			
19				X						Program Control, Scheduling & Work Planning	9.2.2.1			
20				X						Budgets, Briefings & Interactions	9.2.2.2			
21				X						Program Management Technical Support	9.2.2.3			
22			X							Human Resources (HR)	9.2.3			
23				X						Training	9.2.3.1			
24				X						Human Resources (HR) Support Services	9.2.3.2			
25				X						Customer Service (Inactive)	9.2.3.3	Inactive		

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1. PROJECT TITLE/PARTICIPANT										2. DATE		3. IDENTIFICATION NUMBER	
Project Management & Integration (PM&I)										09/30/1999		N/A	
4. LINE NO.	5. WBS ELEMENTS								6. PARTICIPANT WBS ELEMENT CODE	7. BUDGET AND REPORTING NO.	8. PHASE	9. OTHER	
	INDENTURE LEVEL												
	1	2	3	4	5	6	-	-	-				
26			X							Reports & Audits	9.2.4		
27				X						Annual Report to Congress	9.2.4.1		
28				X						Nuclear Waste Fund (NWF) Investment Portfolio	9.2.4.2		
29				X						Internal Audits	9.2.4.3		
30				X						Program Planning	9.2.4.4		
31		X								Information & Education	9.2.5		
32				X						Public Information	9.2.5.1		
33				X						Technical Publications Database	9.2.5.2		
34				X						Graduate Fellowship Program	9.2.5.3		
35				X						Historically Black Colleges & Universities (HBCU)	9.2.5.4		
36		X								OCRWM Headquarters (HQ) Information Management	9.2.6		
37				X						Headquarters (HQ) Information Management & Administration	9.2.6.1		
38				X						Headquarters (HQ) Information Systems	9.2.6.2		
39				X						Headquarters (HQ) Information Management Operations	9.2.6.3		
40				X						Headquarters (HQ) Telecommunications	9.2.6.4		
41				X						Headquarters (HQ) Records Management	9.2.6.5		
42		X								Management & Operating Contractor (M&O) Vienna Information Management	9.2.7		
43				X						Management & Operating Contractor (M&O) Information Management & Administration	9.2.7.1		
44				X						Management & Operating Contractor (M&O) Information Systems	9.2.7.2		
45				X						Management & Operating Contractor (M&O) Information Management Operations	9.2.7.3		
46				X						Management & Operating Contractor (M&O) Telecommunications	9.2.7.4		
47				X						Management & Operating Contractor (M&O) Records Management	9.2.7.5		
48		X								Front Office Support	9.2.8		

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.0		5. WBS ELEMENT TITLE Program Management & Integration (PM&I)	
6. INDEX LINE NO. 1	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to:</p> <ol style="list-style-type: none"> 1. Integrate the CRWM System and verify compliance with regulatory and technical requirements. This includes establishing and maintaining policy and requirements for systems engineering; establishing policies for baseline management and change control; establishing requirements and providing oversight for associated change control procedures; developing policy and procedures to support the regulatory process; and developing and establishing regulatory policy and requirements for the Office of Civilian Radioactive Waste Management (OCRWM) Program. 2. Provide analysis of Total System Life Cycle Cost (TSLCC) and Fee Adequacy; program cost and schedule planning and control; program management policies and procedures; management and program status analysis; budgeting; and analysis of proposed baseline changes. 3. Coordinate all regulatory interactions between the DOE and external organizations, including licensing, Environmental Safety and Health (ES&H), and the Nuclear Environmental Protection Agency (NEPA). In addition, coordinate other activities (e.g., correspondence, agreements, and commitments) with Federal agencies and commitments such as the Nuclear Regulatory Commission (NRC), the Advisory Committee on Nuclear Waste (ACNW), the Department of Transportation (DOT), and the Environmental Protection Agency (EPA). 4. Establish Program-level regulatory policy, licensing strategy and requirements related to Safeguards and Security (S&S), implementation of those requirements and facilitate coordination of S&S activities with external organizations. 5. Perform strategic planning acting as the principal interface and liaison between OCRWM and the Nuclear Waste Technical Review Board (NWTRB). 6. Provide expert input for OCRWM international program planning, management, and policy development for institutional, organizational and programmatic activities, and support the cooperative agreements with other countries interested in exchanging information and developing consensus on waste management issues. 7. Provide human resources training, support services, and customer service. 			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.1		5. WBS ELEMENT TITLE Systems Integration	
6. INDEX LINE NO. 2	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to: ensure that the program baseline documents reflect current program policy; provide support to projects and other Program offices for requirements and design activities; develop and maintain technical documents and processes to integrate functional and physical interfaces and resolve interface issues; and ensure integration between the Department of Energy (DOE) Office of Environmental Restoration and Waste Management (EM)/DOE Office of Civilian Radioactive Waste Management (OCRWM) (RW) and other organizations on work efforts related to systems issues.</p> <p>This WBS element also includes the work scope to: provide integration support to the CRWM System activities external to the Office of Civilian Radioactive Waste Management (OCRWM); support the development of Total System Life Cycle Cost (TSLCC) analyses and the Fee Adequacy Assessment; provide support for project office Site Recommendation and License Application cost analyses; and provide general technical and programmatic integration and management support.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.1.1		5. WBS ELEMENT TITLE Systems Engineering	
6. INDEX LINE NO. 3	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope for Program-level systems engineering, systems planning and integration, systems technical and cost analyses and technical baseline management. Specifically, this includes: establishing and maintaining policy and requirements for systems engineering; identifying all Program-level functions and requirements; establishing policies for baseline management and change control; and establishing requirements and providing oversight for designs, design basis, and associated change control procedures.</p> <p>This WBS element also includes:</p> <ol style="list-style-type: none"> 1. The development efforts related to radioactive high-level waste (HLW) and the Department of Energy (DOE) spent nuclear fuel (SNF). 2. Technical support to projects in pre-acceptance and acceptance operations, agreements, logistics/systems planning and integration. 3. Development of Total System Description - develop, coordinate and document the CRWM System operational concept, including operations planning, operations control, material flow and data flow. 			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.1.2		5. WBS ELEMENT TITLE Systems Analysis	
6. INDEX LINE NO. 4	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope required for:</p> <ol style="list-style-type: none"> 1. Analysis of system-level alternatives to ensure system optimization of costs and logistics. These could include analysis of alternative storage strategies, impacts of incorporation of other wastes into the Civilian Radioactive Waste Management (CRWM) System, and waste stream alternatives for system cost reduction. 2. Project support to analyze alternatives with system-level impacts to support the development of alternative waste acceptance strategies; development of an integrated design basis fuel description; analysis of storage and transportation systems alternatives; and cost analysis of alternative monitored geologic repository (MGR) designs. 			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.1.3		5. WBS ELEMENT TITLE Total System Life-Cycle Cost (TSLCC) Analysis	
6. INDEX LINE NO. 5	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope for systems engineering activities to support the development of the Program Total System Life Cycle Cost (TSLCC), including Waste Acceptance and Transportation Subsystems studies and analyses; to support the Fee Adequacy Assessment; and to provide support for project office Site Recommendation and License Application cost analyses.</p>			

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4. WBS ELEMENT CODE 9.1.4		5. WBS ELEMENT TITLE Baseline Management	
6. INDEX LINE NO. 6	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to develop, implement, and maintain the Office of Civilian Radioactive Waste Management (OCRWM) baseline management plans and procedures; develop Configuration Management training and lessons plans; operate and maintain the OCRWM-wide Configuration Information System; support Program Change Control Board activities; provide data handling for all control board levels; monitor lower-level boards' activities; operate and maintain the Automate Requirements Management System database; develop, implement, and maintain the conformance verification program; and develop and implement procedure for control and distribution of Program-level documents.</p>			

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4. WBS ELEMENT CODE 9.1.5		5. WBS ELEMENT TITLE International Waste Management Technology	
6. INDEX LINE NO. 7	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to provide expert input for the Office of Civilian Radioactive Waste Management (OCRWM) International Program planning, management, and policy development for institutional, organizational and programmatic activities. Additionally, support the bilateral agreements with Canada, France, Japan, Spain, Sweden and Switzerland.</p>			

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4. WBS ELEMENT CODE 9.1.5.1		5. WBS ELEMENT TITLE International Information & Technical Exchange	
6. INDEX LINE NO. 8	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to provide expert input for the Office of Civilian Radioactive Waste Management (OCRWM) International Program planning, management and policy development for institutional, organizational and programmatic activities; monitor radioactive waste management program developments abroad as needed; and provide programmatic oversight support for policy and planning implementation activities and international exchanges.</p>			

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4. WBS ELEMENT CODE 9.1.5.2		5. WBS ELEMENT TITLE International Cooperative Agreements (Inactive)	
6. INDEX LINE NO. 9	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This inactive WBS element includes the work scope to support cooperative agreements with Canada, Sweden and Switzerland.</p> <p>In supporting the cooperative agreement with Canada, activities include radionuclide retardation model development; Cigar Lake natural analogue study; high-temperature properties of seal materials; instrumentation for measuring stress in fractured rock; spent-fuel dissolution model development; hydrochemical instrument calibration; and performance assessment code verification.</p> <p>The WBS element supports the cooperative agreement with Sweden as defined in the Swedish Nuclear Fuel and Waste Management Co./Hard Rock Laboratory (SKB/HRL) agreement. Activities include two-phase flow and grouting effects determination around underground openings; geochemical model verification using SKB data sets; water/rock interaction characterization using radiogenic isotope methods; and investigation of integration of construction and testing methods.</p> <p>The WBS element supports the cooperative agreement with Switzerland as defined in the NAGRA/PA3 agreement. Activities include fractured rock transport characterization; radionuclide sorption prediction in fractured rock; and borehole fluid logging to characterize geologic sections using surface boreholes.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.1.6		5. WBS ELEMENT TITLE Systems Engineering Technical Support (Inactive)	
6. INDEX LINE NO. 10	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This inactive WBS element includes the work scope for the support services to the Systems Engineering Division in the areas of systems integration, systems analysis, baseline management, and international activities.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2		5. WBS ELEMENT TITLE Program Management & Administration (PM&A)	
6. INDEX LINE NO. 11	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to: support the Director of the Office of Civilian Radioactive Waste Management (OCRWM) through the following activities: develop the OCRWM annual budget requests; validate the bases of estimate and schedules supporting the budget requests; preparing responses to Congressional and other external agencies' questions on the program; establish program management policy, procedures, and management system requirements to provide integrated management processes; analyze and report on program progress against the baseline; review proposed cost and schedule baseline changes for adequacy and program impact; allocate the annual funding appropriation and reporting funds status; manage the OCRWM annual work plan development process; provide human resources training, support services, and customer service; provide regulatory compliance support; provide information management support; and provide front office support. Major products include the: OCRWM Corporate Review Budget, Office of Management and Budget (OMB) Budget, and Congressional Budget requests; budget request validation reports; WBS Index and Element Dictionary, Program Cost and Schedule (C&S) Baseline (B/L) document; OCRWM Program Summary Network schedule and graphics; Project Decision Schedule; proposed responses to Congressional and other agencies' questions; program management policy and procedures documents; and monthly management reports on program status.</p>			

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4. WBS ELEMENT CODE 9.2.1		5. WBS ELEMENT TITLE Regulatory Coordination	
6. INDEX LINE NO. 12	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to integrate the following areas: (1) coordination of all regulatory and policy interactions and other activities with external organizations; (2) coordination of Nuclear Regulatory Commission (NRC) interactions to identify and resolve licensing issues affecting multiple Civilian Radioactive Waste Management (CRWM) System elements/projects; (3) compliance with the National Environmental Policy Act (NEPA); (4) general policy guidance on complying with statutes, regulations, and Department of Energy (DOE) directives; and (5) performance and coordination of Safeguards and Security (S&S) activities. Activities supporting the Regulatory Compliance WBS element will be conducted under the following five subelements: Licensing & Regulatory Coordination, Safeguards & Security, Nuclear Waste Technical Review Board (NWTB) & National Academy of Sciences (NAS) Coordination, Environmental Safety and Health (ES&H) and National Environmental Policy Act (NEPA) Coordination, and Regulatory Technical Support.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.1.1		5. WBS ELEMENT TITLE Licensing & Regulatory Coordination	
6. INDEX LINE NO. 13	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to:</p> <ol style="list-style-type: none"> 1. Coordinate interactions with the Nuclear Regulatory Commission (NRC), and represent the Program on regulatory and licensing issues that affect the Civilian Radioactive Waste Management (CRWM) System elements/projects. 2. Coordinate policy development to ensure programmatic consistency. 3. Maintain sufficient involvement in ongoing interactions with NRC to support CRWM System elements/projects to identify/resolve site suitability and regulatory issues related to license applications for the Monitored Geologic Repository (MGR), and facilities designated for interim storage. 4. Review and comment on NRC documents, and coordinate responses to issues raised by regulations or guidelines, including preparing recommendations of petitions for rulemakings. 5. Provide regulatory support and policy guidance for developing licensing strategies. 6. Facilitate/coordinate policy development to ensure that regulatory interactions with NRC, Advisory Committee on Nuclear Waste (ACNW), Environmental Protection Agency (EPA), and other agencies convey a coordinated position. 7. Actively support the preparation for and execution of interactions to ensure the appropriateness and accuracy of Program positions. Develop and maintain a program-wide system to provide reporting on commitments made by or to the Office of Civilian Radioactive Waste Management (OCRWM) to or from the NRC and other organizations. 8. Review/make recommendations on proposed memoranda of understanding, procedural agreements, and other instruments related to regulatory compliance activities between OCRWM and other organizations, internal and external, to the Department of Energy (DOE). 9. Establish Program-level regulatory policy and requirements to ensure implementation of relevant regulatory requirements. Facilitate resolution of compliance issues with other oversight offices within the DOE. 10. Maintain active involvement in the development of regulations, orders, and guidelines promulgated by the DOE and external organizations (e.g., NRC, EPA, and Department of Transportation (DOT)). 			

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(11-84)

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.1.2		5. WBS ELEMENT TITLE Safeguards & Security	
6. INDEX LINE NO. 14	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to establish Program-level regulatory policy, licensing strategy, and requirements related to Safeguards and Security (S&S) and support implementation of requirements. Actively support the development and execution of interactions to ensure the integration and accuracy of program positions on S&S issues. Maintain active involvement in the development of S&S regulations, orders, and guidelines promulgated by the Department of Energy (DOE) and external organizations (e.g., Nuclear Regulatory Commission (NRC), International Atomic Energy Agency (IAEA), National Academy of Sciences (NAS), and national laboratories). Review and make recommendations on proposed memoranda of understanding, procedural agreements, and other instruments related to S&S compliance activities between the Office of Civilian Radioactive Waste Management (OCRWM) and other organizations both internal and external to the DOE. Facilitate resolution of S&S compliance issues with other oversight offices within the DOE.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.1.3		5. WBS ELEMENT TITLE Nuclear Waste Technical Review Board (NWTRB) & National Academy of Sciences (NAS) Coordination	
6. INDEX LINE NO. 15	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to:</p> <ol style="list-style-type: none"> 1. Actively support the preparation for and execution of interactions with the NWTRB and the NAS. Ensure the appropriateness and accuracy of Program positions. 2. Coordinate interactions to ensure programmatic consistency and represent the Program in interactions with the NWTRB and NAS on technical and programmatic issues that affect the Civilian Radioactive Waste Management (CRWM) System elements/projects. 3. Facilitate and coordinate general Program policy development, where necessary, to ensure that interactions with the NWTRB and NAS convey a coordinated Program position. 4. Maintain sufficient involvement in ongoing interactions with the NWTRB and NAS to actively support the CRWM System elements/projects in identifying and resolving technical and programmatic issues raised by those groups. 5. Review and comment on NWTRB and NAS documents and coordinate responses to the views expressed by those groups. 			

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DOE F1332.11 #
(11-B4)

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OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.1.4		5. WBS ELEMENT TITLE Environmental Safety and Health (ES&H) and Nuclear Environmental Protection Agency (NEPA) Coordination	
6. INDEX LINE NO. 16	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to:</p> <ol style="list-style-type: none"> 1. Serve as Program-wide NEPA Compliance Officer (NCO) in coordinating activities of system elements/projects and consolidating monthly reports to Environmental, Safety and Health (ES&H). 2. Actively support and facilitate integration of NEPA compliance activities, including the preparation of Environmental Assessments (EAs) and Environmental Impact Statements (EISs) for the entire Office of Civilian Radioactive Waste Management (OCRWM) program. 3. Develop programmatic guidance on policy for site selection required by NEPA and other applicable environmental regulations. 4. Coordinate and integrate safety and health performance strategies (e.g., Integrated Safety Management) for all CRWM System element/project offices. Provide regulatory compliance oversight in the implementation of Program Safety and Health Performance strategies. 5. Integrate environmental, safety, and health-related technical policy activities within DOE (e.g., Environmental Safety and Health (ES&H), General Council (GC), and Office of Environmental Restoration and Waste Management (EM)). 			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.1.5		5. WBS ELEMENT TITLE Regulatory Technical Support	
6. INDEX LINE NO. 17	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to provide technical support services to the Office of Civilian Radioactive Waste Management (OCRWM) in the following areas: (1) coordination of regulatory policies, interactions and other activities with external organizations; (2) coordination of Nuclear Regulatory Commission (NRC) interactions to identify and resolve licensing issues affecting multiple Civilian Radioactive Waste Management (CRWM) System elements/projects; (3) compliance with the National Environmental Policy Act (NEPA); (4) general policy guidance on complying with statutes, regulations, and Department of Energy (DOE) directives; and (5) performance and coordination of safeguards and security activities. Technical support services will be provided in the areas of Licensing & Regulatory Coordination, Safeguards & Security, Nuclear Waste Technical Review Board (NWTRB) & National Academy of Sciences (NAS) coordination, and NEPA coordination.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.2		5. WBS ELEMENT TITLE Program Management	
6. INDEX LINE NO. 18	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to: support the Director of the Office of Civilian Radioactive Waste Management (OCRWM) annual budget requests; validate the basis of estimate and schedules supporting the budget requests; prepare responses to Congressional and other external agency's questions on the program; establish program management policy, procedures, and management system requirements to provide integrated management processes; analyze and report on program progress against the baseline; review proposed Cost and Schedule (C&S) Baseline (B/L) changes for adequacy and program impact; allocate the annual funding appropriation and reporting fund status; manage the OCRWM annual work plan development process; and provide budget, briefing & interactions support. Major products include: the OCRWM Corporate Review Budget, Office of Management and Budget (OMB) Budget, and Congressional Budget requests; budget request validation reports; WBS Index and Element Dictionary, Program C&S B/L document; OCRWM Program Summary Network schedule and graphics; Project Decision Schedule; proposed responses to Congressional and other external agency's questions; program management policy and procedures documents; and monthly management reports on program status.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.2.1		5. WBS ELEMENT TITLE Program Control, Scheduling & Work Planning	
6. INDEX LINE NO. 19	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to support the Director of the Office of Civilian Radioactive Waste Management (OCRWM) by: establishing program management policy, procedures, and management system requirements to provide integrated management processes; analyzing and reporting on Program progress against the baseline; reviewing proposed cost and schedule baseline changes for adequacy and Program impact; allocating the annual funding appropriation and reporting funds status; managing the OCRWM annual work plan development process; and preparing responses to Congressional and other external agencies' questions on the Program. Major products include the: OCRWM WBS Index and Element Dictionary; Program Cost and Schedule Baseline document; OCRWM Program Summary Network schedule and graphics; Program Decision Schedule; proposed responses to Congressional and other agencies' questions; management policy and procedures documents; and monthly management reports on Program status.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.2.2		5. WBS ELEMENT TITLE Budgets, Briefings & Interactions	
6. INDEX LINE NO. 20	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes the work scope to support the Office of Civilian Radioactive Waste Management (OCRWM) to: validate the basis of estimate and schedules supporting the budget requests; prepare responses to Congress and other external agency's questions on the program; establish program management policy, procedures, and management system requirements; analyze and report on program progress against the baseline; review proposed Cost and Schedule (C&S) Baseline (B/L) changes for adequacy and program impact; allocate the annual funding appropriation and reporting fund status; and manage the OCRWM annual work plan development process. Major products include: consolidation of the program performance measurement data in the Planning and Control System (PACS) and PACSView; inputs to budget request validation reports; the OCRWM Program Summary Network schedule and graphics; Project Decision Schedule; proposed responses to Congressional and other external agency's questions; and draft monthly management reports on program status.			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.2.3		5. WBS ELEMENT TITLE Program Management Technical Support	
6. INDEX LINE NO. 21	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to: support Program Management in the implementation of new initiatives to improve the efficiency and effectiveness of program and project management systems and processes; conduct reviews and analyses in conjunction with program management documentation development and revision; assist in the development of presentation material in support of internal and external briefing requirements; and support program management improvement efforts, including participation in special task force activities, as directed.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.3		5. WBS ELEMENT TITLE Human Resources (HR)	
6. INDEX LINE NO. 22	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope to provide HR development, customer service, and Quality Assurance (QA) training. Specifically, it includes work scope related to implementation of career development, assisting in development of personnel system descriptions and performance records, and development of personnel databases.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.3.1		5. WBS ELEMENT TITLE Training	
6. INDEX LINE NO. 23	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to: scheduling and conducting of training classes; and developing training materials including lesson plans, procedures and other documentation.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.3.2		5. WBS ELEMENT TITLE Human Resources (HR) Support Services	
6. INDEX LINE NO. 24	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to providing support for the development of position descriptions, performance plans, and Equal Employment Opportunity (EEO)/Affirmative Action plans; preparation of presentations and certificates; advise on organizational matters; maintenance of HR databases; and evaluation of Career Development Program and recommendations on performance measurement and improvement processes.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.3.3		5. WBS ELEMENT TITLE Customer Service (Inactive)	
6. INDEX LINE NO. 25	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This inactive WBS element includes the work scope associated with updating and implementing the customer service plan.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.4		5. WBS ELEMENT TITLE Reports & Audits	
6. INDEX LINE NO. 26	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to: the development of the Office of Civilian Radioactive Waste Management (OCRWM) Annual Report to Congress and OCRWM input to the Secretary's Annual Report to Congress; management of the Nuclear Waste Fund (NWF) portfolio; responses to the Government Accounting Office (GAO) and Inspector General (IG) audits and inquiries; support for activities mandated by the Federal Managers' Financial Integrity Act; and conduct of an independent audit of OCRWM financial statements.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.4.1		5. WBS ELEMENT TITLE Annual Report to Congress	
6. INDEX LINE NO. 27	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to establishing procedures for and developing the Office of Civilian Radioactive Waste Management (OCRWM) Annual Report to Congress and the OCRWM Chapter of the Secretary's Annual Report to Congress.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.4.2		5. WBS ELEMENT TITLE Nuclear Waste Fund (NWF) Investment Portfolio	
6. INDEX LINE NO. 28	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to developing, coordinating, and recommending borrowing and investment strategies for the Nuclear Waste Fund (NWF).</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.4.3		5. WBS ELEMENT TITLE Internal Audits	
6. INDEX LINE NO. 29	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to conducting an independent audit of the financial statements of the Nuclear Waste Fund (NWF) and Defense Nuclear Waste Disposal appropriations.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.4.4		5. WBS ELEMENT TITLE Program Planning	
6. INDEX LINE NO. 30	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the logistical and administrative support for two Office of Civilian Radioactive Waste Management (OCRWM) offsite planning workshops. It also includes the provision of limited layout and editorial support in the development of Program planning documents such as the OCRWM Program Plan, Five-Year Planning Summary, Annual Performance Plan, Annual Performance Report, and related activities.</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.5		5. WBS ELEMENT TITLE Information & Education	
6. INDEX LINE NO. 31	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope for managing the Office of Civilian Radioactive Waste Management (OCRWM) graduate fellowship program and the OCRWM Historically Black Colleges and Universities (HBCU) program. It also includes the work scope for managing the OCRWM National Information Center (communication outreach program; developing and disseminating public information about OCRWM; administering OCRWM Headquarters (HQ) Home Page and digitized media database; and developing and implementing public education materials/programs).</p>			

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.5.1		5. WBS ELEMENT TITLE Public Information	
6. INDEX LINE NO. 32	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to: the management of the Office of Civilian Radioactive Waste Management (OCRWM) public information program; communication outreach program; development and dissemination of public information about OCRWM; administration of the OCRWM Headquarters (HQ) Home Page and digitized media database; and development and implementation of public education materials/programs.</p>			

**U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.5.2		5. WBS ELEMENT TITLE Technical Publications Database	
6. INDEX LINE NO. 33	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the provision of abstracting, Internet posting, and distribution services for the Office of Civilian Radioactive Waste Management (OCRWM) technical publications.</p>			

**U.S. DEPARTMENT OF ENERGY
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PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-B4)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.5.3		5. WBS ELEMENT TITLE Graduate Fellowship Program	
6. INDEX LINE NO. 34	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to coordinating a graduate fellowship program in disciplines related to radioactive high-level waste (HLW) management.</p>			

**U.S. DEPARTMENT OF ENERGY
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PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1801-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.5.4		5. WBS ELEMENT TITLE Historically Black Colleges & Universities (HBCU)	
6. INDEX LINE NO. 35	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to supporting Historically Black Colleges and Universities (HBCU) by providing a faculty fellowship program to strengthen academic programs and faculty research in radioactive high-level waste (HLW) management.</p>			

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DOE F1332.11 /
(11-84)

FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.6		5. WBS ELEMENT TITLE OCRWM Headquarters (HQ) Information Management	
6. INDEX LINE NO. 36	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes work scope for: the Office of Civilian Radioactive Waste Management (OCRWM) HQ and Program-wide information management (IM) policies, coordination, and planning; integrated systems development and deployment; Program records and correspondence management; computer and telecommunications operations and maintenance; IM compliance and control; and implementation of a Program-wide IM performance assessment and continuous improvement program. Major products include the IM Strategic Plan, IM Five -Year Program Plan, the OCRWM component of the Department of Energy (DOE) wide IM Crosscut plan, and an annual IM Short-Range Site Plan.</p>			

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DOE F1332.11 #
(11-84)

FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.6.1		5. WBS ELEMENT TITLE Headquarters (HQ) Information Management & Administration	
6. INDEX LINE NO. 37	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to providing Information Resources Management (IRM) technical coordination in conducting IRM meetings; establishing IRM work plans, schedules, and performance measures; defining the Office of Civilian Radioactive Waste Management (OCRWM) HQ information resource requirements; facilitating the establishment and maintenance of the OCRWM information resource baseline; and coordinating OCRWM Program Level-1 RM activities with other Departmental IRM organizations.</p>			

**U.S. DEPARTMENT OF ENERGY
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DOE F1332.11 #
(11-84)

FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.6.2		5. WBS ELEMENT TITLE Headquarters (HQ) Information Systems	
6. INDEX LINE NO. 38	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to the engineering, design, development, training, maintenance, documentation, and software baseline management of software applications for the Office of Civilian Radioactive Waste Management (OCRWM), to be utilized at Department of Energy (DOE) HQ or enterprise-wide. Example applications include Lotus Notes databases (e.g., Integrated Tracking System - ITS), Access databases, Digital Media Database (DMD), Automated Forms System (AFS), Unified Scanning System (USS), Computer Based Training (CBT) applications, etc.</p>			

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DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.6.3		5. WBS ELEMENT TITLE Headquarters (HQ) Information Management Operations	
6. INDEX LINE NO. 39	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to providing the management, support, operations, expansions, training, and security for the Office of Civilian Radioactive Waste Management (OCRWM) HQ computer resources and operations in compliance with relevant Federal, Department of Energy (DOE), and RW Orders. These assets include, but are not limited to, VAX computer facilities, Novell local (LAN) and wide area networks (WAN), application servers (Lotus Notes, CaLANdar, etc.), gateways, personal computers, printers, workstations, and all of their associated peripherals. Additional work scope includes the deployment and support of OCRWM-wide applications (such as Automated Forms System (AFS), Integrated Tracker System (ITS), etc.).</p>			

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PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-84)

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.6.4		5. WBS ELEMENT TITLE Headquarters (HQ) Telecommunications	
6. INDEX LINE NO. 40	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope associated with engineering, operation and maintenance of the Office of Civilian Radioactive Waste Management (OCRWM) HQ telecommunications resources to ensure Program communications and accessibility to Program information systems, data, and records. This includes voice systems (phones, pagers, cellular phone services, 800 number services, etc.), data communications (LAN, WAN, leased data lines, modem communications, etc.), video conference systems, and FTS-2000 services.</p>			

**U.S. DEPARTMENT OF ENERGY
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PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.6.5		5. WBS ELEMENT TITLE Headquarters (HQ) Records Management	
6. INDEX LINE NO. 41	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element provides for the capture, index, storage, retrieval and disposition of the Office of Civilian Radioactive Waste Management (OCRWM) Program Records in accordance with applicable Federal, Departmental, and OCRWM policies and requirements. Provide for the development, implementation, evaluation, and continuous improvement of plans, processes, procedures, and practices, as well as related resources and facilities, to support the creation, capture and management of program records. Provide support for HQ Correspondence and Control Unit Support. Implement the OCRWM Program Records Retention Schedule (OPRRS) and provide on-going maintenance of the completed OPRRS. Maintain imaging technology in support of OCRWM records processing and HQ correspondence control.</p>			

**U.S. DEPARTMENT OF ENERGY
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PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-94)

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.7		5. WBS ELEMENT TITLE Management & Operating Contractor (M&O) Vienna Information Management	
6. INDEX LINE NO. 42	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes the work scope for M&O Vienna information management (IM) policies, coordination, and planning; integrated systems development and deployment; Program records and correspondence management; computer and telecommunications operations and maintenance; IM compliance and control; and support of a Program-wide IM performance assessment and continuous improvement program. Support is provided to the Office of Civilian Radioactive Waste Management (OCRWM) IM Strategic Plan, OCRWM IM Five-Year Program Plan, OCRWM component of the Department of Energy (DOE) wide IM Crosscut plan, and the annual OCRWM IM Short-Range Site Plan.			

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PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.7.1		5. WBS ELEMENT TITLE Management & Operating Contractor (M&O) Information Management & Administration	
6. INDEX LINE NO. 43	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element provides for planning, administration, review, and reporting for M&O Vienna and Capital Gallery information management (IM) activities including preparing inputs to the Short Range Plan, IM UNICALL Plan, IM Program Plan, IM Strategic Plan, Multi-year Program Plan. Provide for Automated Data Processing (ADP) procurement planning, tracking and reporting and software license management.</p>			

**U.S. DEPARTMENT OF ENERGY
WORK BREAKDOWN STRUCTURE DICTIONARY
PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-04)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.7.2		5. WBS ELEMENT TITLE Management & Operating Contractor (M&O) Information Systems	
6. INDEX LINE NO. 44	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES 			
10. SYSTEM DESIGN DESCRIPTION 		11. BUDGET AND REPORTING NUMBER 	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope related to the engineering, design, development, training, maintenance, documentation, and software baseline management of software applications for the M&O Vienna, which may be used by others as needed, e.g., Department of Energy (DOE) Headquarters (HQ). Example applications include Lotus Notes databases, Access databases, electronic concurrence, automated records turnover, electronic records receipt and conversion of native files, etc.</p>			

**U.S. DEPARTMENT OF ENERGY
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PART II - ELEMENT DEFINITION**

DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.7.3		5. WBS ELEMENT TITLE Management & Operating Contractor (M&O) Information Management Operations	
6. INDEX LINE NO. 45	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes the work scope related to providing the management, support, operations, expansions, training, and security for M&O Vienna computer resources and operations in compliance with relevant Federal, Department of Energy (DOE), and RW Orders. These assets include, but are not limited to, VAX computer facilities, Novell local (LAN) and wide area networks (WAN), application servers (Lotus Notes, CaLANdar, etc.), gateways, personal computers, printers, workstations, and all of their associated peripherals. Additional work scope includes the deployment and support of M&O developed applications (such as the Records Data Management System (RDMS), Configuration Management Information System (CMIS), etc.).			

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DOE F1332.11 #
(11-84)

FORM APPROVED
OMB NO. 1901-1400

1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.7.4		5. WBS ELEMENT TITLE Management & Operating Contractor (M&O) Telecommunications	
6. INDEX LINE NO. 46	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION <p>a. Cost Content</p> <p>Labor, subcontracts, other direct costs, procured materials and equipment, and travel.</p> <p>b. Technical Content</p> <p>Not applicable.</p> <p>c. Work Statement</p> <p>This WBS element includes the work scope associated with engineering, operation and maintenance of M&O Vienna telecommunications resources to ensure Program communications and accessibility to Program information systems, data, and records. This includes voice systems (phones, pagers, cellular phone services, 800 number services, etc.), data communications (LAN, WAN, leased data lines, modem communications, etc.), and video conference systems.</p>			

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DOE F1332.11 #
 (11-84)

FORM APPROVED
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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.7.5		5. WBS ELEMENT TITLE Management & Operating Contractor (M&O) Records Management	
6. INDEX LINE NO. 47	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element provides for the capture, index, storage, retrieval and disposition of M&O records in accordance with applicable Federal, Departmental, and Office of Civilian Radioactive Waste Management (OCRWM) policies and requirements. Provide for the development implementation, evaluation and continuous improvement of M&O plans, processes, procedures and practices, as well as related resources and facilities to support the creation, capture and management of M&O records. Support M&O Document Control requirements. Also support M&O records training, forms management and forms design.			

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DOE F1332.11 #
(11-84)

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1. PROJECT TITLE/PARTICIPANT Program Management & Integration (PM&I)		2. DATE 09/30/1999	3. IDENTIFICATION NUMBER N/A
4. WBS ELEMENT CODE 9.2.8		5. WBS ELEMENT TITLE Front Office Support	
6. INDEX LINE NO. 48	7. REVISION NO. AND AUTHORIZATION Revision 3		8. DATE 09/30/1999
9. APPROVED CHANGES			
10. SYSTEM DESIGN DESCRIPTION		11. BUDGET AND REPORTING NUMBER	
12. ELEMENT TASK DESCRIPTION a. Cost Content Labor, subcontracts, other direct costs, procured materials and equipment, and travel. b. Technical Content Not applicable. c. Work Statement This WBS element includes the work scope to provide support on emerging issues by addressing the rapid response and legislative/policy analysis requirements of the Office of the Director, as requested by the Director or his staff. The support will include time-sensitive products that will be used as inputs into the Director's and his staff's development of testimony and presentation; documents that provide program justification; responses to Congressional inquiries; technical inputs into statements of Program policies; special technical studies such as parametric studies and analyses; inputs and analyses to track legislative developments; and other issue papers. Support will also include analysis of legislative and policy issues focusing on the meaning, intent, and implications of legislative or policy proposals and, finally, assistance in the development and implementation of outreach and communications plans and materials to identify and respond to stakeholder needs and concerns. This element also includes providing support to the National Association of Regulatory Utility Commissioners (NARUC) through a cooperative agreement.			